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MACRO ECONOMICS VARIABLE BETWEEN FINANCIAL PERFORMANCES: CASE STUDY INDONESIA INDUSTRY

Ida Farida
Lecturer at the Faculty of Economics Universitas Pakuan, Bogor, Indonesia
Faculty of Economics and Business Universitas Padjadjaran, Bandung, Indonesia.

Abstract

This study entitles macroeconomic variables among the financial performance of company case studies in Indonesia. The purpose of this study is to investigate the influence of selected macroeconomic variables on the financial performance of non-bank companies in Indonesia. The study has been done by using causality test, co integration test and multiple linear regression test. In this study, the data in the assumption is assumed to be valid and reliable to be done to the 3 test. This research uses data of five telecommunication industry companies listed in Indonesian stock exchange, period of 2006 to 2016 financial statements. The variables used in this study consist of variable financial performance of company: ROA, ROE, CR and EPS while macroeconomic variable consist of : rupiah exchange rate against USD dollar, world oil price and Indonesian bank interest rate. The research findings show that macroeconomic and financial performance variables are significant for some of the variables, but they are not co integrated and relate to one another
Keyword: economic variable, financial ratio, relationship model.

I. INTRODUCTION

There is a very high correlation and correlation between financial and macroeconomic performance variable, explained by some previous study which discuss about this. Basically in previous studies that use variable financial performance and macroeconomic variables as a basis to see and want to know the conducive economic conditions, based on the banking industry in the sample research. In general, the banking-based financial system, is considered to grow more in comparison with non-bank based systems. This is believed to make the economy more conducive to growth. In some studies, however, the multi-faceted financial system, including non-bank financial institutions, will be able to protect and safeguard the state of the economy in a country from the effects of financial shocks and crises and can easily recover from such economic shocks.

According to several studies which are summarized in Romer (2012) [1], Muchiri. H. G. (2012) [2] and Aguiar and Broner. (2006) [3], explains how the use of macroeconomic variables and the overall field of economic studies will increase knowledge about shocks and economic crises. But indirectly the focus of an economic behavior will be seen as a big picture that can be regionalized or internationalized. Usually in some studies using macroeconomic variables and financial performance will be able to see the concerns associated with national goals or other indicators such as the existence of aggregate in an economic situation. Some of the common variables used in the study are EPS, ROA, ROE and total assets in terms of financial performance, whereas in terms of

macroeconomic factors, the variables are the interest rate, the value of economic input, GDP and inflation and exchange rates. They assume that macroeconomic variables can play an important role in explaining the company's financial performance indirectly.

For the current circumstances researchers should be able to try some alternatives and innovative ones relating to the use of several variables in macroeconomics and financial performance that can see the influence or relationship in a company, or in other words that can see the condition of the company as a whole that is influenced by economic variables. On this basis the authors use some macroeconomic variables and financial performance for a study, using samples of several companies in the same industry. This study consists of 5 sections, sections 1 and 2 are introductions and literature, sections 3 and 4 are methodological and research results, the last part is the conclusion of the study.

II. LITERATURE REVIEW

In studies [4,5 & 6] describes several factors that are considered to affect the performance of a company and some companies such as profitability, leverage and liquidity. In the study they performed on average using three types of variables from macroeconomics such as inflation, GDP and domestic interest rates to investigate their impact on corporate earnings performance or profitability. From several profitability ratios that are often used as lat analysis is Return On Asset, Retrun On Equity and EAT. 3 variables of macroeconomics will be combined with some variable profitability, or in other words internal variables are influenced will be combined with variables from external mengengarui. Ratios are used and considered as proxies in terms of profitability. From some of the studies they did averaged using multiple regression analysis with dta time series and multiple regression analysis using dat panel. In conclusion, the external factor (macro economy) that is used in the research does not affect the condition or condition of the company as a whole, with the meaning that the external variable does not affect the internal variable. But the study gives a real contribution to other variables such as profits earned by the company, so that the risk of the company is expected to focus more on assessing and making external factors as things that can affect and make the company's condition become unstable.

Still in the same case, the use of external and internal variables in research conducted by [7,8 & 9] is not much different, how they investigate macroeconomic variables on financial performance variables in the banking industry in some countries. It can be concluded that the profitability value of some financial ratios used in the study indicates a significant relationship using panel data test. The empirical research they use variables such as firm size, return on assets (ROA), Earning Per Share (EPS), Net interest margin (NIM) and return on equity (ROE). The results of their study show how Liquidity ratios have an inert effect and explain insignificantly to variables such as (ROA) and have an inverse and significant effect on the variable (ROE). Their study shows that external factors that use some exchange and macroeconomic variables, and variable growth in the money supply are considered as some internal variables.

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III. RESEARCH METHOD

In this study using financial report data for five telcommunication industry companies listed in Indonesia stock exchange, the period of 2006 to 2016 financial statements. The variables used in this study consist of variable financial performance of the company are: ROA, ROE, CR and EPS while the macroeconomic variables consisting of: the rupiah exchange rate against the USD dollar, world oil prices and the interest rates of Indonesian banks. Data analysis in this study using the test of causality, cointegration test and multiple regression test, the third test of this analysis is used to see the relationship among the variables in doing research. This study was conducted at the time of January 2018.

Result and Discussion

In this study, starting with a causality test, the test is intended to detect the direction of the relationship between any two variables with distributed lags in a VAR system. If the F-Statistic value is greater than the critical F value at a certain level of significance (α = 1%, 5% or 10%), then null hypothesis (H0: Σαij = 0) is rejected or alternate hypothesis (Ha: Σαij dit 0) is accepted, which means there is a simultaneous influence of a free variable with a particular distributed lag to the dependent variable.

Table 1: Result for causality test

Granger Causality Tests			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
CR does not Granger Cause BI_RATE	54	0.15252	0.6978
BI_RATE does not Granger Cause CR		0.78633	0.3794
EPS does not Granger Cause BI_RATE	54	0.88498	0.3513
BI_RATE does not Granger Cause EPS		0.45275	0.5041
ROA does not Granger Cause BI_RATE	54	0.18143	0.6719
BI_RATE does not Granger Cause ROA		5.28361	0.0257
ROE does not Granger Cause BI_RATE	54	2.13549	0.1501
BI_RATE does not Granger Cause ROE		0.00810	0.9286
US_$_RP does not Granger Cause BI_RATE	54	2.39002	0.1283
BI_RATE does not Granger Cause US_$_RP		9.87313	0.0028
WP does not Granger Cause BI_RATE	54	1.68857	0.1996
BI_RATE does not Granger Cause WP		0.17505	0.6774
EPS does not Granger Cause CR	54	0.43136	0.5143
CR does not Granger Cause EPS		0.88202	0.3521
ROA does not Granger Cause CR	54	3.03755	0.0874
CR does not Granger Cause ROA		0.78118	0.3809
ROE does not Granger Cause CR	54	0.01412	0.9059
CR does not Granger Cause ROE		0.48631	0.4887
US_$_RP does not Granger Cause CR	54	0.08912	0.7665
CR does not Granger Cause US_$_RP		2.06037	0.1573
WP does not Granger Cause CR	54	2.84697	0.0977
CR does not Granger Cause WP		1.05864	0.3084
ROA does not Granger Cause EPS	54	4.8E-05	0.9945
EPS does not Granger Cause ROA		5.05867	0.0288
ROE does not Granger Cause EPS	54	0.00633	0.9369

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EPS does not Granger Cause ROE		2.94147	0.0924
US_$_RP does not Granger Cause EPS	54	0.10566	0.7465
EPS does not Granger Cause US_$_RP		0.13318	0.7167
WP does not Granger Cause EPS	54	4.48627	0.0391
EPS does not Granger Cause WP		0.00493	0.9443
ROE does not Granger Cause ROA	54	0.07638	0.7834
ROA does not Granger Cause ROE		0.02628	0.8719
US_$_RP does not Granger Cause ROA	54	0.52626	0.4715
ROA does not Granger Cause US_$_RP		0.00676	0.9348
WP does not Granger Cause ROA	54	0.77823	0.3818
ROA does not Granger Cause WP		0.00530	0.9422
US_$_RP does not Granger Cause ROE	54	0.29921	0.5868
ROE does not Granger Cause US_$_RP		4.3E-05	0.9948
WP does not Granger Cause ROE	54	0.75510	0.3889
ROE does not Granger Cause WP		0.00331	0.9543
WP does not Granger Cause US_$_RP	54	0.05690	0.8124
US_$_RP does not Granger Cause WP		1.99896	0.1635

Sourced: Author process with software

According to Table 1, there is a causal relationship between macroeconomic variables and firm performance. This is indicated by Granger's causality test results with null hypothesis =αbetween WP and US $ DRp with prob probes 0.1635 and 0.8124 (sig at 10%). The higher the WP effect, then US $ DRp may increase and will make the relationship between the two variables cause each other.

The next test, using co integration. co integration test is a continuation of unit root test and integration degree test before conducting cointegration test then researcher need to observe time series economic data to be used. The observer must be sure in advance whether the data used is stationary or not, it can be done through the unit root test and cointegration test. In the case of one or more variables having different degrees of integrity, they are not cointegrated angel granger 1987 in [10]

Table 2: Result for co integration test

Series: BI_RATE CR EPS ROA ROE US_$_RP WP				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.802520	259.2279	125.6154	0.0000
At most 1 *	0.641226	171.6336	95.75366	0.0000
At most 2 *	0.556413	116.2802	69.81889	0.0000
At most 3 *	0.498282	72.38565	47.85613	0.0001
At most 4 *	0.243123	35.14092	29.79707	0.0110
At most 5 *	0.220744	20.09898	15.49471	0.0094
At most 6 *	0.115549	6.630560	3.841466	0.0100
Trace test indicates 7 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Sourced: Author process with software

In Table 2, we present the test results of cointegration. The purpose of Coointergrasi Test is to find

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out the long-term equilibrium relationship between e and CA in Indonesia by using Johansen Test method. This method is required to perform two statistical tests, namely the Trace Test. Last on proceed with multiple regressions.

Table 3 : Result for regression

Dependent Variable: BI_RATE				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.821687	2.204332	3.548326	0.0009
CR	-0.010896	0.005562	-1.958935	0.0559
EPS	-4.610005	0.000131	-0.351175	0.7270
ROA	0.020586	0.031987	0.643556	0.5229
ROE	-0.001936	0.005790	-0.334422	0.7395
US_$_RP	0.002703	0.000875	3.089610	0.0033
WP	-0.150686	0.059302	-2.540992	0.0143
R-squared	0.361140	Mean dependent var		8.655455
Adjusted R-squared	0.281282	S.D. dependent var		2.691504
S.E. of regression	2.281782	Akaike info criterion		4.606204
Sum squared resid	249.9134	Schwarz criterion		4.861683
Log likelihood	-119.6706	Hannan-Quinn criter.		4.705000
F-statistic	4.522301	Durbin-Watson stat		2.468067
Prob(F-statistic)	0.001043			

Sourced: Author process with software

Table 3 shows the test results for the proposed model by multiple linear regression method. Multiple linear regression analysis is useful to see the relationship linearly between two or more independent variables with the dependent variable. Multiple linear assumptions are generally equal to all assumptions in simple linear regression, in addition there is no perfect linear relationship between two or more explosive (exogenous) variables. With the assumption that the OLS estimator will be linear, linear function of the response variable (endogenous), not biased the expectant expectation value is the parameter value, consistent for n, the predictor toward the actual parameter value, and the predictor 0, the smallest variety among all possible estimates and BLUE (Best Linear Unbiased Estimators) ie If we find an estimator that has the stated criteria, or UNBIASED, linear, and the most minimal variant then it is called BLUE. Here is the show for the results of the multiple regression equation model that can be.

Estimation Equation:

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BI_RATE = C(1) + C(2)*CR + C(3)*EPS + C(4)*ROA + C(5)*ROE + C(6)*US_$_RP + C(7)*WP

Substituted Coefficients:

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BI_RATE = 7.82168712229 - 0.0108957179103*CR - 4.60628488793e-05*EPS + 0.0205855749738*ROA - 0.00193637169874*ROE + 0.00270265015677*US_$_RP - 0.150685624806*WP

IV. CONCLUSION

From the research that has been carried out can be explained that macroeconomic variables and corporate financial performance are related and mutually influence, firstly by conducting the test of causality, cointegration and multiple regression. It is possible that there is a causal relationship between economic variables and firm performance during the study period and whether the relationship is significant between one another. Thus the proposed model can explain statistically in the form of equations generated from multiple regression tests.

REFERENCE

[1] Romer, D (2012), Advanced Macroeconomics, McGraw-Hill Irwin
[2] Muchiri. H. G. (2012), The impact of macroeconomic variables on the performance of the Nairobi securities exchange. University of Nairobi.
[3] Aguiar and Broner. (2006)"Determining Underlying Macroeconomic Fundamentals During Emerging Market Crises: Are Conditions As Bad As They Seem?".Journal Of Monetary Economics 53.4 : 699-724.
[4] Kanwal, S and Nadeem, M (2013), THE IMPACT OF MACROECONOMIC VARIABLES ON
[5] THE PROFITABILITY OF LISTED COMMERCIAL BANKS IN PAKISTAN, Page 186–201, http://www.ejbss.com/recent.aspx.
[6] Sufian, F., and Habibullah, M. S. (2010). Assessing the impact of financial crisis on bank Performance, empirical evidence from Indonesia. ASEAN Economic Bulletin, 27, 245-262.
[7] Shaher, T. A., et, all. (2011). The major factors that affect banks' performance in Middle Eastern countries. Journal of Money, Investment and Banking(20), 101-109. Retrieved from http://www.eurojournals.com/JMIB.htm
[8] Al-Qudah, A.M, and Jaradat, M.A, (2013), The Impact of Macroeconomic Variables and Banks Characteristics on Jordanian Islamic Banks Profitability: Empirical Evidence, International Business Research; Vol. 6, No. 10, Published by Canadian Center of Science and Education.
[9] Athanasoglou, P., et all, (2005). Bank-specific, industry-Specific and macroeconomic determinants of bank profitability. Working Paper, 25, Bank of Greece.
[10] Hameed, A. M. B. (2003). Determinants of Profitability In Islamic Banks: Some Evidence From The Middle East, Islamic Economic Studies (1st.). Capital Markets and Financial Intermediation. Cambridge University press.
[11] Pesaran, H.M (1987). "Econometrics," The New Palgrave: A Dictionary of Economics, V.2. Reprinted in J. Eatwell et al., eds. (1990).
[12] Wooldridge, Jeffrey (2013). Introductory Econometrics, A modern approach. South-Western, Cengage learning. ISBN 978-1-111-53104-1.